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10/828,348

04/21/2004

Hiroshi Ishikawa

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WENDEROTH, LIND & PONACK, L.L.P.

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WASHINGTON, DC 20006-1021

EXAMINER

MACKEY, JAMES P

ART UNIT

PAPER NUMBER

1791

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                          |  |
|------------------------------|--------------------------------------|------------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/828,348 | <b>Applicant(s)</b><br>ISHIKAWA, HIROSHI |  |
|                              | <b>Examiner</b><br>James Mackey      | <b>Art Unit</b><br>1791                  |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/21/2004</u> .                                               | 6) <input type="checkbox"/> Other: ____.                          |

***Claim Objections***

Claims 1 and 2 are objected to because of the following informalities: in claim 1 at line 19, and in claim 2 at line 19, “from to” should be corrected. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 9, “near the starting point”, and line 13, “near the end point” are indefinite, since the metes and bounds of what is considered “near” cannot be ascertained. In other words, the term "near" in the claims is a relative term which renders the claim indefinite; the term "near" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Similarly in claim 2, line 10, “near the starting point” and line 13, “near the end point” render the claim of indefinite scope.

In claim 3, line 10, “near the starting point”, line 13, “near and forward of the extruder”, and line 15, “near the end point” render the claim of indefinite scope. Further in claim 3,

Claims 4-43 are rejected due to their dependence on indefinite claim 3.

In claim 4, line 2, claim 5, line 3, and claim 14, line 3, the use of "near" renders the claims of indefinite scope.

In claim 7, line 3, “the rear of the starting point” lacks proper antecedent basis in the claim; and “the rear” on line 3 and “in front of” on line 4 are indefinite as to exactly where “the rear” and “front” are located relative to the other structural elements of the claimed apparatus. Claims 17-19 are indefinite for the same reasons as claim 7.

***Allowable Subject Matter***

Claims 1-43 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

The prior art of record does not teach or fairly suggest a process for continuously producing a suction cupped sheet in an apparatus having a plurality of molds movable along a horizontal linear conveying path of an endless track by extruding a resin sheet sequentially into the molds being conveyed in the form of a train forward near the starting point of the conveying path, molding the extruded resin into a suction cupped sheet by conveying the molds forward along the conveying path until the extruded resin is solidified, drawing the suction cupped sheet sequentially from the molds near the end point of the conveying path, and returning the emptied molds sequentially to the starting point of the conveying path, as claimed in claims 1 and 2. The prior art of record does not teach or fairly suggest an apparatus for continuously producing a suction cupped sheet comprising a molding including a mold conveyor which conveys a plurality of molds in the form of a train forward along a horizontal linear conveying path of an endless track, an extruder including a T-die fitted over the conveying path near the starting point of the conveying path for extruding a resin sequentially into the molds being conveying along the conveying path, a forming roll supported adjacent the extruder for forming the top of the extruded resin into a continuous surface, a drawing mechanism adjacent the end point of the

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conveying path for drawing the suction cupped sheet sequentially from the molds to empty the molds while the molds are conveyed along the conveying path, and a mold circulator for circulating the emptied molds to the starting point of the conveying path, wherein the molder is adapted to mold the extruded resin into a suction cupped sheet, as claimed in claim 3.

While it is known in the prior art to continuously produce a sheet with protruding surface features in an apparatus having a plurality of molds movable along an upper horizontal linear conveying path of an endless track by extruding a resin sheet sequentially into the molds being conveyed in the form of a train, molding the extruded resin into a sheet having protruding surface features by conveying the molds forward along the conveying path until the extruded resin is solidified, drawing the suction cupped sheet sequentially from the molds near the end point of the conveying path, lowering the emptied molds sequentially, returning the lowered molds along a lower horizontal linear conveying path, and lifting the returned molds sequentially from the end point of the lower path to the starting point of the upper path (see Brumlik et al., U.S. Patent 4,050,873, and Ishikawa, U.S. Patent 6,213,755), the prior art does not teach or fairly suggest utilizing such an apparatus and process to continuously form a suction cupped sheet, wherein the molder is adapted to mold the extruded resin into a suction cupped sheet as claimed. While it is also known to mold suction cups between two cooperating injection molds (see Adams, U.S. Patent 4,734,027), the prior art does not teach or fairly suggest a molder having a plurality of molds adapted to mold extruded resin into a suction cupped sheet as claimed.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 571-272-1135. The examiner can normally be reached on M-F, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James Mackey/  
Primary Examiner  
Art Unit 1791

jpm  
February 28, 2008